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OBTAINING OPTIMAL PERSONALIZED SURVEILLANCE STRATEGIES FOR PATIENTS WITH SCREEN-DETECTED COLORECTAL ADENOMAS USING DISCRETE EVENT SIMULATION
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BACKGROUND: Colorectal cancer (CRC) screening in Spain uses a fecal-occult blood test (FOBT) for screening and colonoscopy as diagnostic tool. Adenomas constitute the most frequent findings of this colonoscopy, and the removal of these premalignant lesions is considered the main contributor to the reduction of mortality and incidence of CRC. There is no clear agreement regarding the risk classification of adenomas as well as the optimal surveillance strategy for each degree of risk. Genomics may contribute to further delineate individual risk, and its characterization is crucial for improving the effectiveness of surveillance strategies by targeting individuals who would benefit the most. **OBJECTIVE:** To optimize, within a CRC screening program, surveillance of premalignant lesions using individual risk-based strategies, based on genetic analysis, that take into account benefits, harms and costs. **METHODS:** A discrete-event simulation model that reproduces the process of screening and takes into account the costs at every stage, from invitation to screening to surveillance of findings will be upgraded. The natural history of the disease will be included, with special emphasis on the events after adenoma detection at screening colonoscopy. Based on the results of a study aimed at identifying common genetic variants associated with an increased susceptibility to develop colorectal adenomas, the risk of developing cancer or recurrent adenomas according to the clinical characteristics of the patients will be included in the model. The interval between surveillance colonoscopies will be optimized with the objective of minimizing the number of colonoscopies while keeping the same level of effectiveness, defined as the impact on incidence of advanced adenomas and cancer over time. IMPLICATIONS: Simulation models can help in the design of personalized screening strategies. Personalizing CRC screening through surveillance strategies may improve allocation of resources under cost constraints, minimize harms and maximize benefits of population-based programs, affecting millions of people.

PHP213
FIXED REFERENCE PRICING OR BENEFIT ASSESSMENT OF ESTABLISHED PRODUCTS – FROM THE FRYING PAN INTO THE FIRE?
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For nearly 25 years, the most effective tool for containing public spending on pharmaceutical drugs in Germany is the formation of fixed reference price groups (FRPG) - the annual savings have continuously risen from 0.31 billion Euros in 1990 to 4.32 billion Euros in 2009. Hereunder, the so-called "jumbo groups" (patent-free and patented substances) that were introduced with the SHI Modernization Act of 2004 have been of high importance. With the recently published, first-time call for benefit assessments of substances in the established market (April 2013), the Federal Joint Committee (FJC) has yet launched another potent mean of reducing costs. Unlike the early benefit assessment of new active ingredients where several substances have undergone scrutiny since January 2011, it is unclear what the outlook is for the substances in the established market. Therefore, the objective of the presentation is to assess whether a FRPG or a benefit assessment is to be preferred by pharmaceutical companies for established substances. Fixed reference price scenarios are calculated for therapeutically comparable substance classes within the call for benefit assessment of substances in the established German drug market. For the established substances, a risk assessment and benchmark is performed based on the criteria in the code of procedure of the FJC and the assessment of new active ingredients, respectively. The results of the ongoing FRPG scenario evaluation will be displayed as bar charts by savings in €. The risk assessment is displayed in a tabular format. Apart from discussing the results of the FRPG calculations compared to the benefit assessment of established substances, the presentation discusses implications for international reference pricing, since the German market has been regarded as the last bastion of free pharmaceutical pricing for a long time.

PHP214
HTA NATIONAL PUBLIC POLICY AND THEIR SOCIO-ECONOMIC ENVIRONMENT: A EUROPEAN PERSPECTIVE
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OBJECTIVES: Socioeconomic factors are important components of Health Technology Assessment's (HTA) institutionalization. If most of the countries have established HTA agencies, they required scientific expertise to emerge and become institutionalized. In a previous scientometric work, we did an analysis of scientific conditions of HTA emergence in the scientific literature. Our observation allowed us to link HTA research capacity and HTA institutionalization in a given country. **METHODS:** In order to explore endogenous as well exogenous factors sustaining HTA expertise, we undertake a principal component analysis as multivariate analysis technique in order to establish which variable are more appropriate for the assessment of scientific expertise in the context of HTA public policy. **RESULTS:** HTA national public policy could be ranked according to their academic expertise. Country HTA publications productivity matched in comparison with health expenses & gross product in several countries. Nevertheless this ranking doesn't tell us why some country like UK perform well while others like France don't. **CONCLUSIONS:** Our results underline the country difference of arbitration between public policies such as public health, and industrial or innovation policy. Among tested variables, it appears that the regulation of drug pricing and market access, or the macroeconomic impact of pharmaceutical industry in a country contribute to determine the scope of HTA policies.

PHP215
CLINICAL, EPIDEMIOLOGICAL AND ECONOMIC METRICS DIFFERENCE BETWEEN HPV-RELATED AND TRADITIONAL HEAD AND NECK CANCERS
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Excessive smoking and alcohol consumption were the traditional causal factors in many head and neck cancers in the United States and Western Europe. However, the Human papilloma Virsus (HPV) is now responsible for up to 80% of cancers of the oropharynx. HPV-related oropharyngeal cancers are a distinct clinical, epidemiological and molecular entity. This poster will show that the metrics used to describe the burden of a cancer to policy makers are very nuanced. As the patients with HPV-associated oropharyngeal cancers are younger and healthier individuals, they have been shown to have a better prognosis than traditional head and neck cancers. The goal of treatment has shifted from mortality to morbidity in these cancers. Measures of morbidity (functional status) are now important considerations in treatment options. This poster will compare and contrast various epidemiological measures - Incidence /100,000, Prevalence, Years of Life Lost, Mortality to Incidence Ratio with respect to HPV-related and unrelated head and neck cancers. Finally, we will discuss the economic metrics (e.g. Disability adjusted life years, Years of working age lost) used to portray a cancer and make a link with research funding in various countries. The question posed is whether mortality or morbidity should predominate in resource/research allocation decisions?

PHP216
COMPARING THE VALUE OF DIFFERENT HTA DECISION MAKING PROCESS: EVALUATING THE EVALUATORS
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OBJECTIVES: How health care decision makers arrange their appraisal process of new health care technologies have direct impact on population health. However, no consensus exists on how the appraisal process should be designed to maximise population health or societal welfare. The purpose of this work is to develop a simple analytic framework that enables analysis of the different stakeholders' (decision makers and manufacturers) payoffs from alternative appraisal processes. **METHODS:** The analytic framework outlined in the paper is based on viewing the appraisal processes as a diagnostic test aimed at identifying cost-effective (true positives) and cost-ineffective (true negative) technologies. Based on this characterisation pay-off functions are formalised to analyse how design and operation of the appraisal process impacts population health and manufacturers' earnings. **RESULTS:** The framework identifies those factors that have the greatest influence on population health and manufactures payoffs and illustrates how this leads to conflicting interests towards how the appraisal process should be set up and operated. It is demonstrated that there is no uniquely optimal way to design and operate the appraisal of new health care technologies, since optimal design and operation depends on the price of technologies that undergo appraisal. The analysis also shows that operating a given reimbursement system implies a trade-off between incentivising cost-effective pricing (pricing below the threshold/willingness to pay) and rejecting more cost-effective technologies (increasing the proportion of false negatives). It is further demonstrated how the framework can be used to gain insight into current policy questions including who should bear the burden of proof and how rigorous the process should be. **CONCLUSIONS:** There is no unique way to design and operate the appraisal of health care technologies in order to maximise population health or societal welfare. Improving health or societal welfare through the appraisal process requires careful consideration of payoffs and incentives of all stakeholders.

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THE FRAMEWORK FOR HEALTH ECONOMIC MODELING AND MULTI-CRITERIA DECISION ANALYSIS (MCDA) ON THE EXAMPLE OF THE MOBILE STROKE UNIT (MSU)
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OBJECTIVES: The generation of evidence in the early development of a technology is a bottle neck for uncertainty in decision making. Health economic modeling can support the assessment of early innovation, but complex modeling approaches are criticized for being "black boxes" which in turn reduce their acceptance in health policy. **METHODS:** MCDA can address the gap about what matters to health care decision makers and data collection by explicitly structuring decision criteria. The combination of MCDA modeling and health economic modeling implies a potential for gaining efficiency. The simulation model of the intervention for stroke, the MSU, is analyzed regarding application of MCDA. **RESULTS:** Experts and stakeholders can support the: 1) Definition of model factors e.g. outcome parameter, which is generally accepted (Barthel-Index for Stroke outcome); 2) Evidence collection e.g. is the data valid? (outcome of thrombolysis); 3) Model structure e.g. interrelation between input parameters (stroke incidence, risk factors and population); 4) Validation of a model e.g. reassessment of step 1-3; and 5) Final analysis by using MCDA e.g. importance of economic vs. medical benefit. **CONCLUSIONS:** The methodological combination is advantageous because simulation modeling as well as MCDA have a similar sequence of events. The simulation output, which is commonly validated by technical and medical experts, can gain validity by the heterogeneous perspectives of participating stakeholders in the validation process. For example, this raises